PRAYAG

[A CENTRE OF KNOWLEDGE INFORMATICS FOR SUSTAINABLE DEVELOPMENT]

Vision:

Contribute towards enhanced understanding of diverse human activities with an emphasis on sustainable development through an informatics inclusive cross-disciplinary approach.

Objectives:

- Incubate informatics inclusive cross-disciplinary R&D in newer, relatively unexplored, and divergent application domains with a special focus on sustainability
- Enrich theoretical and empirical grounds for creation of new paradigms with a special focus on sustainability
- To enrich theory and practice (professional, research, and pedagogical) of informatics through infusion of theory and practice of divergent disciplines and professions
- To Identify, document, and analyse: Informatics inclusive innovations and sustainable approaches in various domains, Cross-disciplinary practices and approaches in IT industry and academia.
- Design new cross-disciplinary educational programs

Sustainable Development

According to World Commission on Environment and Development (1987), **Sustainable development** means- *development which meets the needs of the present without compromising the ability of future generations to meet their own needs*.

Sustainability has following dimensions:

- Conservation and enrichment of physical environment and cultural heritage
- Enhancement of the accessibility and quality of basic facilities
- Nutrition, water supply, housing, sanitation, health care, energy etc.
- Advancement of the support system for enhancing human's happiness
- Empowerment and autonomy
- Relatedness, cooperation, and collaboration

Informatics and Sustainable Development

The field of informatics is increasingly engaging with above mentioned three dimensions of sustainability in the solution as well as in the problem space. We seek to enhance our understanding about such engagements through multiple perspectives as well as approaches. Prayag is focused at the applications of computers that can have ecological and societal impacts. The members of Prayag encourage the faculty and students in developing solutions to the problems of sustainable development mainly, energy, climate change, environment, health etc.

Participating Faculty Members

Dr. Satish Chandra (Coordinator)- CSE & IT

Prof. Pammi Gauba – BioTechnology

Dr. Indira P Sarithey– BioTechnology

Dr. Shikha Jain- CSE &IT

Dr. Priyadarshini, BioTechnology

Dr. Parul Agrawal- CSE

Annual Report 2021-2022

Activities during 2021-2022

I. ONLINE QUIZ ON SUSTAINABLE DEVELOPMENT AWARENESS

The MCQ Type quiz was held on April 09, 2022

A total of 58 students of second and third year Undergraduate Students appeared in the quiz.

Three winners in the quiz were given certificates.

II. PANEL DISCUSSION ON "BRIDGES AND BARRIERS TO CROSS-DISCIPLINARY RESEARCH"

A Panel discussion on the topic "**Bridges and Barriers to Cross Disciplinary Research**" was held online on 20 April, 2022 at 2:30 pm

The panelists in the panel discussion are:

- **Prof. Jitender Kumar Chhabra**, HOD of Dept. of Computer Science at NIT Kurukshetra, India.

- **Prof Brij B. Gupta**, Director, International Centre for AI and Cyber Security Research and Innovations, and Professor in the Department of Computer Science and Information Engineering at Asia University, Taiwan.

- **Prof. Pawan Kumar Dhar** from School of Biotechnology, JNU, India

No. of participants: 100

Financial support provided by the Institute: Rs. 9000/-

Summary:

The moderator of the discussion Prof. Satish Chandra initiated the conversation by welcoming the panelists and the audience. Mentioning the differences between interdisciplinary, multi-disciplinary, trans-disciplinary and cross disciplinary research, he also discussed that the difference between the various paradigms lies in the extent and method of encroachment or union amongst the various discipline.

Prof. Jitendra Chhabra discussed about the barriers to cross disciplinary research such as Mindset and Existing Academic structure. Prof. Brij B. Gupta explained to the panel about that need of funding and career development for promoting multi-

disciplinary research. Prof. Pawan Dhar discussed that attitude and lack of communication is one of the major barriers to multi-disciplinary research.

All the panelists agreed that for really making cross disciplinary research possible, the emphasis should be given on communication across the disciplines. Some kind of funds as well as rewards should be initiated for promoting it. The discussion was followed by Q&A session from the audience.

The moderator of the discussion was Prof. Satish Chandra and the event was managed by Dr. Amarjeet Prajapati. The panel discussion lasted for 1 hour 15 minutes. Finally, vote of thanks was presented by senior Prayag member Prof. Indira P. Sarthey.

PRAYAG: RESOURCES

Hardware

Item	Configuration	Quantity	OS
NVIDIA DGX STATION	20-core Intel Xeon e5-2698 v4 2.2 GHz; 256 GB DDR4; 4x GPUS (Tesla v100 SXM2)	1	Ubuntu, Linux
Lenovo S510	CPU - I5, 2.7 GHz RAM - 8GB HDD - 500 GB MONITOR KEYBOARD MOUSE	10	Window 7 & Linux

Softwares:

1. TensorFlow &Keras Library,

2. Python,

3. Eclipse,

4. Weka tool,

5. Mongo db,

6. Anaconda,

7. Java with Net beans framework,

8. Nuodb,

9. Matlab(student version),

10. others

High-Performance Computing Facility
DGX Workstation

Technical Specification

Components	Description
Processor	20-core Intel Xeon e5-2698 v4 2.2 GHz
System Memory	256 GB DDR4
GPU	4 x GPUs (Tesla V100 SXM2)
Performance	500 Tera-FLOPS mix precision
GPU Memory	128 GB (8X32) total system
CUDA Cores	Approx. 5000 per GPU
Tensor Cores	Approx. 600 per GPU
Power Requirements	1.5KW or less with hot-plug & redundant power supply
Storage	4X 1.92 TB SSD RAID 0
Cooling	Water Cooled
System Network	Dual 10 GbE
GPU communications protocol	NVLink 2.0/ configured in hybrid cube-mesh NVLink network topology
OS Support	Ubuntu Linux
USB Port	6
Noise level	< 40 dB
Display	3X Display port, 4K resolution

How to access:

- Users are required to have a username and password in order to access and use the software stack.
- Please send an email to **ashish.mishra@mail.jiit.ac.**in requesting the username and password.
- You will receive a valid credential along with a manual on how to use it.

High-Performance Computing Facility
DGX Workstation

Software Installed

- Ubuntu 18.04.3 LTS
- CUDA toolkit 10.1
- Docker version 19.03.1
- GROMACS -Molecular dynamics package
- Transfer Learning Toolkit for Video Streaming Analytics
- Deep Learning Studio
- Open CV
- Jupyter Notebook
- Riva GPU Accelerated speech AI SDK
- CUDA tuned Neural Network (cuDNN) Primitives
- TensorRT Inference Engine
- DeepStream SDK Video Analytics
- CUDA tuned BLAS
- CUDA tuned Sparse Matrix Operations (cuSPARSE)
- Multi-GPU Communications (NCCL),
- Kubernetes,
- TensorFlow,
- caffe ,
- pytorch,
- Theano,
- Keras,
- caffe2,
- CNTK,
- Natural language processing toolkit,
- Following Containers are installed on GPU
    - Tensorflow 2.1,
    - Pythorch,
    - NVIDIA Deep Learning GPU Training System (DIGITS),
    - RAPID GPU Accelerated Data Science Framework.

DGX Workstation
List of some of the Users Allotment

SL. No.	Username	Department	Faculty/Research Scholar
1	dgxuser1	CSE & IT	Faculty
2	dgxuser2	CSE & IT	Faculty
3	dgxuser3	CSE & IT	Faculty
4	dgxuser4	CSE & IT	Faculty
5	dgxuser5	CSE & IT	Faculty
6	dgxuser6	CSE & IT	Faculty
7	dgxuser7	CSE & IT	Faculty
8	dgxuser8	CSE & IT	Faculty
9	dgxuser9	CSE & IT	Faculty
10	dgxuser10	CSE & IT	Faculty
11	dgxuser11	CSE & IT	Faculty
12	dgxuser12	CSE & IT	Faculty
13	dgxuser13	CSE & IT	Faculty
14	dgxuser14	CSE & IT	Faculty
15	dgxuser15	CSE & IT	Faculty
16	dgxuser16	CSE & IT	Faculty
17	dgxuser17	CSE & IT	Faculty
18	dgxuser18	CSE & IT	Faculty
19	res_scholar	CSE & IT	Faculty
20	scholar1	CSE & IT	Research Scholar
21	dgxuser19	PMSE	Faculty
22	dgxuser20	PMSE	Faculty
23	dgxuser21	CSE & IT	Faculty
24	dgxuser22	CSE & IT	Faculty
25	dgxuser23	CSE & IT	Faculty
26	dgxuser24	CSE & IT	Faculty
27	res_scholar2	CSE & IT	Research Scholar
28	res_scholar3	CSE & IT	Research Scholar
29	dgxuser25	CSE & IT	Faculty
30	res_scholar4	CSE & IT	Research Scholar
31	dgxuser26	CSE & IT	Faculty
32	dgxuser27	CSE & IT	Faculty
33	res_scholar5	CSE & IT	Research Scholar
34	dgxuser28	CSE & IT	Faculty
35	dgxuser29	CSE & IT	Faculty
36	dgxuser30	Biotechnology	Faculty
37	dgxuser31	CSE & IT	Faculty
38	res_scholar6	CSE & IT	Research Scholar
39	dgxuser32	ECE	Faculty
40	res_scholar7	CSE & IT	Research Scholar
41	dgxuser33	Humanities and Social Sciences	Faculty

42	dgxuser34	CSE & IT	Faculty
43	jiit_student1	CSE & IT	Student
44	dgxuser35	CSE & IT	Faculty
45	dgxuser36	CSE & IT	Faculty
46	res_scholar8	ECE	Research Scholar
47	res_scholar9	CSE & IT	Research Scholar
48	dgxuser37	CSE & IT	Faculty
49	dgxuser38	CSE & IT	Faculty

Sample LOG REPORT (DGX Workstation)

```
dgxuser2 pts/0      10.81.234.6     Sat Dec 24 17:12:39 2022 - Sat Dec 24 18:21:02 2022  (01:08)
cseadmin pts/0      172.16.94.17    Fri Dec 23 11:06:39 2022 - Fri Dec 23 11:12:12 2022  (00:05)
cseadmin pts/0      172.16.94.17    Fri Dec 23 02:32:23 2022 - Fri Dec 23 02:32:47 2022  (00:00)
cseadmin pts/0      172.16.94.17    Fri Dec 23 02:10:48 2022 - Fri Dec 23 02:28:58 2022  (00:18)
reboot   system boot  4.15.0-55-generi Thu Dec 22 10:55:24 2022   Tue Dec 22 19:34:35 2022  (02:01)
dgxuser2 pts/3      127.0.0.1       Wed Dec 21 12:14:32 2022 - Wed Dec 21 12:14:34 2022  (00:00)
dgxuser2 pts/3      127.0.0.1       Wed Dec 21 12:14:32 2022 - Wed Dec 21 12:14:34 2022  (00:00)
dgxuser3 pts/3      172.16.125.54   Fri Dec 16 12:18:37 2022 - Fri Dec 16 19:47:19 2022  (07:28)
dgxuser2 pts/3      127.0.0.1       Fri Dec 16 10:44:34 2022 - Fri Dec 16 10:45:22 2022  (00:00)
dgxuser2 pts/3      172.16.69.80    Fri Dec 16 10:36:07 2022 - Fri Dec 16 10:36:43 2022  (00:00)
dgxuser2 pts/3      10.81.234.6     Thu Dec 15 10:56:26 2022 - Thu Dec 15 11:00:28 2022  (00:04)
dgxuser2 pts/3      10.81.234.6     Thu Dec 15 10:54:05 2022 - Thu Dec 15 10:54:40 2022  (00:00)
dgxuser2 pts/3      10.81.234.6     Wed Dec 14 21:57:56 2022 - Thu Dec 15 02:10:24 2022  (04:12)
dgxuser2 pts/3      10.81.234.6     Wed Dec 14 16:43:53 2022 - Wed Dec 14 19:56:50 2022  (03:12)
dgxuser3 pts/3      172.16.125.54   Wed Dec 14 14:13:10 2022 - Wed Dec 14 14:57:09 2022  (00:43)
dgxuser3 pts/5      172.16.125.54   Wed Dec 14 12:59:38 2022 - Wed Dec 14 14:09:31 2022  (01:09)
dgxuser3 pts/4      172.16.208.46   Wed Dec 14 12:27:33 2022 - Wed Dec 14 16:42:13 2022  (04:14)
dgxuser3 pts/4      172.16.208.16   Wed Dec 14 11:55:42 2022 - Wed Dec 14 11:56:09 2022  (00:00)
cseadmin pts/4      172.16.208.16   Wed Dec 14 11:50:11 2022 - Wed Dec 14 11:55:06 2022  (00:04)
dgxuser2 pts/3      10.81.234.6     Wed Dec 14 09:07:16 2022 - Wed Dec 14 13:19:15 2022  (04:11)
cseadmin pts/3      172.16.208.16   Tue Dec 13 16:04:28 2022 - Tue Dec 13 16:06:37 2022  (00:02)
cseadmin pts/3      172.16.208.16   Tue Dec 13 15:54:17 2022 - Tue Dec 13 15:57:13 2022  (00:02)
dgxuser1 pts/3      172.16.76.131   Tue Dec 13 13:47:09 2022 - Tue Dec 13 13:49:35 2022  (00:02)
dgxuser1 pts/4      172.16.76.131   Tue Dec 13 13:42:20 2022 - Tue Dec 13 13:45:23 2022  (00:03)
res_scho pts/3      172.16.76.30    Tue Dec 13 13:31:46 2022 - Tue Dec 13 13:45:34 2022  (00:13)
res_scho pts/1      172.16.208.118  Tue Dec 13 12:24:20 2022   still logged in
dgxuser2 pts/6      10.81.234.7     Mon Dec 12 17:30:55 2022 - Mon Dec 12 17:40:05 2022  (00:09)
jiit_stu pts/5      10.81.234.6     Mon Dec 12 17:24:08 2022 - Mon Dec 12 18:01:37 2022  (00:37)
dgxuser2 pts/5      10.81.234.6     Mon Dec 12 13:44:09 2022 - Mon Dec 12 15:52:06 2022  (02:07)
jiit_stu pts/6      10.81.234.6     Sat Dec 10 08:45:00 2022 - Sat Dec 10 08:49:15 2022  (00:04)
jiit_stu pts/5      172.16.113.8    Sat Dec 10 06:46:54 2022 - Sat Dec 10 09:42:22 2022  (02:55)
jiit_stu pts/5      10.81.234.6     Sat Dec 10 02:37:47 2022 - Sat Dec 10 03:20:14 2022  (00:42)
jiit_stu pts/5      172.16.113.8    Sat Dec 10 00:45:33 2022 - Sat Dec 10 01:21:49 2022  (00:36)
jiit_stu pts/6      10.81.234.6     Fri Dec  9 18:52:34 2022 - Sat Dec 10 01:40:38 2022  (06:48)
jiit_stu pts/5      172.16.113.8    Fri Dec  9 18:28:23 2022 - Fri Dec  9 20:41:34 2022  (02:13)
jiit_stu pts/5      172.16.113.8    Fri Dec  9 18:04:37 2022 - Fri Dec  9 18:22:32 2022  (00:17)
jiit_stu pts/5      172.16.113.8    Fri Dec  9 16:41:52 2022 - Fri Dec  9 16:42:33 2022  (00:00)
jiit_stu pts/5      10.81.234.6     Fri Dec  9 10:45:52 2022 - Fri Dec  9 13:57:56 2022  (03:12)
jiit_stu pts/6      172.16.113.8    Fri Dec  9 09:15:52 2022 - Fri Dec  9 09:42:20 2022  (00:26)
jiit_stu pts/5      10.81.234.6     Fri Dec  9 09:11:12 2022 - Fri Dec  9 10:36:01 2022  (01:24)
jiit_stu pts/5      10.81.234.6     Thu Dec  8 20:01:17 2022 - Fri Dec  9 09:10:46 2022  (13:09)
jiit_stu pts/5      172.16.113.8    Thu Dec  8 14:36:19 2022 - Thu Dec  8 18:09:23 2022  (03:33)
jiit_stu pts/6      10.81.234.6     Thu Dec  8 12:20:43 2022 - Thu Dec  8 13:08:46 2022  (00:48)
jiit_stu pts/5      10.81.234.6     Thu Dec  8 12:03:57 2022 - Thu Dec  8 12:35:15 2022  (00:31)
jiit_stu pts/5      10.81.234.6     Thu Dec  8 11:23:09 2022 - Thu Dec  8 11:23:12 2022  (00:00)
dgxuser3 pts/7      172.16.122.5    Thu Dec  8 10:42:49 2022 - Thu Dec  8 10:49:03 2022  (00:06)
jiit_stu pts/5      172.16.113.8    Thu Dec  8 10:41:45 2022 - Thu Dec  8 10:51:24 2022  (00:09)
dgxuser3 pts/6      172.16.125.54   Thu Dec  8 10:05:13 2022 - Thu Dec  8 11:32:29 2022  (01:27)
jiit_stu pts/5      172.16.113.8    Thu Dec  8 09:28:54 2022 - Thu Dec  8 10:09:11 2022  (00:40)
jiit_stu pts/6      10.81.234.6     Wed Dec  7 22:21:14 2022 - Thu Dec  8 08:06:15 2022  (09:45)
jiit_stu pts/5      172.16.113.8    Wed Dec  7 19:35:28 2022 - Wed Dec  7 23:35:11 2022  (03:59)
cseadmin pts/6      172.16.208.16   Wed Dec  7 16:00:36 2022 - Wed Dec  7 17:06:23 2022  (01:05)
cseadmin pts/6      172.16.208.16   Wed Dec  7 15:34:01 2022 - Wed Dec  7 15:42:20 2022  (00:08)
dgxuser3 pts/5      172.16.125.54   Wed Dec  7 15:08:59 2022 - Wed Dec  7 19:20:16 2022  (04:11)
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dgxuser3 pts/5      172.16.125.54   Wed Dec  7 14:16:35 2022 - Wed Dec  7 15:08:00 2022 (00:51)
jiit_stu pts/5      172.16.201.85   Wed Dec  7 13:46:38 2022 - Wed Dec  7 14:03:22 2022 (00:16))
jiit_stu pts/5      172.16.113.8    Tue Dec  6 20:25:28 2022 - Wed Dec  7 07:11:46 2022 (10:46)
jiit_stu pts/5      10.81.234.6     Tue Dec  6 17:32:48 2022 - Tue Dec  6 19:34:35 2022 (02:01)
jiit_stu pts/5      172.16.113.8    Tue Dec  6 14:49:12 2022 - Tue Dec  6 17:28:39 2022 (02:39)
jiit_stu pts/5      172.16.113.8    Tue Dec  6 12:57:01 2022 - Tue Dec  6 13:37:35 2022 (00:40)
res_scho pts/4      172.16.208.118  Tue Dec  6 12:52:58 2022   still logged in
res_scho pts/3      172.16.208.118  Tue Dec  6 12:50:58 2022   still logged in
res_scho pts/1      172.16.208.118  Tue Dec  6 12:28:29 2022   still logged in
cseadmin pts/7      172.16.94.17    Tue Dec  6 00:26:42 2022 - Tue Dec  6 00:33:13 2022 (00:06)
dgxuser2 pts/5      172.16.94.17    Tue Dec  6 00:23:24 2022 - Tue Dec  6 00:33:06 2022 (00:09)
cseadmin pts/5      172.16.94.17    Tue Dec  6 00:14:25 2022 - Tue Dec  6 00:23:00 2022 (00:08)
jiit_stu pts/1      10.81.234.6     Mon Dec  5 22:53:32 2022 - Tue Dec  6 04:04:43 2022 (05:11)
jiit_stu pts/1      10.81.234.7     Mon Dec  5 08:26:07 2022 - Mon Dec  5 08:37:58 2022 (00:11)
dgxuser2 pts/5      10.81.234.6     Sun Dec  4 22:30:35 2022 - Mon Dec  5 14:52:37 2022 (16:22)
dgxuser2 pts/1      10.81.234.6     Sun Dec  4 20:28:05 2022 - Sun Dec  4 22:37:22 2022 (02:09)
dgxuser2 pts/1      10.81.234.6     Sun Dec  4 17:34:14 2022 - Sun Dec  4 19:03:25 2022 (01:29)
dgxuser2 pts/5      10.81.234.6     Sun Dec  4 16:41:46 2022 - Sun Dec  4 17:34:03 2022 (00:52)
jiit_stu pts/1      172.16.113.8    Sun Dec  4 13:22:40 2022 - Sun Dec  4 17:12:33 2022 (03:49)
jiit_stu pts/1      10.81.234.6     Sun Dec  4 10:51:56 2022 - Sun Dec  4 11:16:11 2022 (00:24)
jiit_stu pts/1      10.81.234.6     Sun Dec  4 07:51:33 2022 - Sun Dec  4 10:05:53 2022 (02:14)
jiit_stu pts/5      10.81.234.6     Sun Dec  4 00:08:54 2022 - Sun Dec  4 07:15:34 2022 (07:06)
dgxuser2 pts/1      10.81.234.6     Sat Dec  3 23:04:12 2022 - Sun Dec  4 01:21:28 2022 (02:17)
cseadmin pts/1      172.16.94.17    Sat Dec  3 20:23:22 2022 - Sat Dec  3 21:17:02 2022 (00:53)
res_scho pts/6      172.16.208.118  Sat Dec  3 11:28:02 2022 - Tue Dec  6 12:28:20 2022 (3+01:00)
res_scho pts/3      172.16.208.118  Sat Dec  3 11:16:00 2022 - Tue Dec  6 12:50:52 2022 (3+01:34)
jiit_stu pts/5      172.16.113.8    Sat Dec  3 10:39:24 2022 - Sat Dec  3 13:56:20 2022 (03:16)
jiit_stu pts/1      10.81.234.6     Sat Dec  3 09:38:45 2022 - Sat Dec  3 16:03:55 2022 (06:25)
dgxuser3 pts/1      172.16.99.129   Fri Dec  2 01:02:48 2022 - Fri Dec  2 02:04:44 2022 (01:01)
dgxuser3 pts/1      172.16.99.129   Fri Dec  2 00:32:14 2022 - Fri Dec  2 01:01:23 2022 (00:29)
dgxuser2 pts/1      127.0.0.1       Thu Dec  1 15:34:01 2022 - Thu Dec  1 15:36:33 2022 (00:02)
dgxuser3 pts/1      172.16.208.16   Thu Dec  1 09:29:53 2022 - Thu Dec  1 09:30:27 2022 (00:00)
cseadmin pts/1      172.16.208.16   Thu Dec  1 09:21:49 2022 - Thu Dec  1 09:29:24 2022 (00:07)
cseadmin pts/5      172.16.208.16   Wed Nov 30 17:32:04 2022   still logged in
cseadmin pts/1      172.16.208.16   Wed Nov 30 17:29:38 2022   still logged in
jiit_stu pts/1      172.16.113.8    Wed Nov 30 14:10:08 2022 - Wed Nov 30 15:17:25 2022 (01:07)
jiit_stu pts/1      172.16.113.8    Tue Nov 29 15:52:39 2022 - Tue Nov 29 16:58:41 2022 (01:06)
res_scho pts/4      172.16.208.118  Tue Nov 29 12:31:20 2022   still logged in
dgxuser3 pts/1      172.16.121.13   Tue Nov 29 12:05:47 2022 - Tue Nov 29 15:38:24 2022 (03:32)
cseadmin pts/4      172.16.208.16   Mon Nov 28 17:35:30 2022 - Mon Nov 28 17:56:03 2022 (00:20)
cseadmin pts/1      172.16.208.16   Mon Nov 28 17:32:49 2022 - Mon Nov 28 17:36:34 2022 (00:03)
cseadmin pts/1      172.16.208.16   Mon Nov 28 17:25:17 2022 - Mon Nov 28 17:32:16 2022 (00:06)
dgxuser2 pts/4      10.81.234.6     Mon Nov 28 12:18:02 2022 - Mon Nov 28 16:14:38 2022 (03:56)
res_scho pts/3      172.16.208.118  Mon Nov 28 11:59:05 2022   still logged in
jiit_stu pts/3      172.16.201.146  Fri Nov 25 15:59:57 2022 - Fri Nov 25 18:50:01 2022 (02:50)
jiit_stu pts/4      172.16.200.239  Fri Nov 25 14:49:09 2022 - Fri Nov 25 14:54:15 2022 (00:05)
jiit_stu pts/3      172.16.80.219   Fri Nov 25 14:47:53 2022 - Fri Nov 25 15:04:34 2022 (00:16)
jiit_stu pts/4      172.16.200.239  Fri Nov 25 14:15:13 2022 - Fri Nov 25 14:46:24 2022 (00:31)
jiit_stu pts/3      172.16.80.219   Fri Nov 25 13:18:49 2022 - Fri Nov 25 14:47:25 2022 (01:28)
jiit_stu pts/6      10.81.234.6     Fri Nov 25 08:06:12 2022 - Fri Nov 25 08:12:48 2022 (00:06)
jiit_stu pts/6      10.81.234.6     Fri Nov 25 05:58:02 2022 - Fri Nov 25 08:05:31 2022 (02:07)
cseadmin pts/7      172.16.94.17    Thu Nov 24 23:57:01 2022 - Fri Nov 25 01:19:58 2022 (01:22)
cseadmin pts/6      172.16.94.17    Thu Nov 24 23:40:28 2022 - Fri Nov 25 00:44:57 2022 (01:04)
jiit_stu pts/6      172.16.113.8    Thu Nov 24 22:04:53 2022 - Thu Nov 24 23:01:35 2022 (00:56)
res_scho pts/5      172.16.208.118  Thu Nov 24 11:05:13 2022 - Fri Nov 25 10:44:38 2022 (23:39)
res_scho pts/1      172.16.208.118  Wed Nov 23 10:47:12 2022   still logged in
res_scho pts/8      10.81.234.7     Wed Nov 23 00:29:53 2022 - Wed Nov 23 02:44:52 2022 (02:14)
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PhD's related to Sustainability Development

Completed:

- Nitin Kumar Tyagi, "Smart Electronic Governance using Blockchain and Intelligent Techniques", October 18, 2022, Supervised by Dr. Mukta Goyal
- Varsha Garg, " Effective Identification of Endometrial Tuberculosis for Infertility using Machine Learning", August 16, 2022, Supervised by Prof. Vikas Saxena
- Munaza Ramzan, "Electroencephalography Signal based Effective Elicitation of Emotions for Brain Computer Interfacing using Computational Techniques", May 14, 2022, Supervised by Dr. Suma Dawn
- Madhuri Gupta, "A Computer Assisted Gene Expression Test Method for Early Prediction of Breast Cancer using Machine Learning Techniques", May 06, 2022, Supervised by Dr. Bharat Gupta
- Pawan Kumar Upadhyay, "Improved Approaches for Prognosis of Abnormalities in Skin Lesion Images", September 28, 2019, Supervised by Prof. Satish Chandra
- Ekta Bhatt, "Exploring phytoremediation potential of ocimum basilicum and vigna radiata for antibiotics ", June 2022, Supervised by Prof. Pammi Gauba, Biotechnology

Ongoing:

- Bhavana Bansal, " Medical Image Analysis using Metaheursitics" Supervised by Dr. Anita Sahoo.
- Abhimanyu Chauhan, Domain: Bioinformatics, Supervised by Dr. Chakresh Jain, Biotechnology
- Shahikala Patiyal, Domain: System Biology, Network Biology Supervised by Dr. Shazia Haider, Biotechnology
- Chetna Faujdar, " Antiurolithiatic potential of selected Indian medicinal plants" , Supervised by Dr. Priyadarshini, Biotechnology
- Aaysha Gupta, Domain: Image Processing, Supervised by Dr. Anuj Bhardwaj, Mathematics
- Manish Sharma, Domain: IoT and Cloud, Supervised by Hema N.

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